REMARKS

Claims 1 and 6-17 are all the claims now pending in the application. Claims 4 and 5 have been canceled, and their subject matters have been incorporated into claim 1. Thus, no new search is needed by the Examiner.

I. Claim Rejections under 35 U.S.C. § 103

Claims 1 and 6-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higuchi et al. (U.S. Patent No. 5,830,085) in view of Shama (U.S. Patent No. 4,848,770). Applicant traverses the rejection for at least the reasons discussed below.

To establish a *prima facie* case of obviousness the Examiner must show that the prior art references, when combined, teach or suggest all of the claim limitations. See MPEP § 2143. Applicant respectfully submits that the references cited above by the Examiner fail to teach or suggest all of the claim limitations as set forth in the present application.

The references fail to teach a compression ratio that is at least 0.98 while satisfying the remaining limitations of the claims. The compression ratio (the compression corresponds to the amount of deformation when subjected to a load of 1,275 N from an initial load of 98 N) between the mantle and the solid core described in Higuchi et al. does not fall within the claimed range (that is, at least 0.98) when the other properties of the Higuchi ball remain within the claimed range. Attached please find a declaration which explains that the golf balls of Examples 1-7 were constructed and tested. As shown in the attached declaration, Examples 1-3 and 5-7

teach and suggest compression ratios of 0.87 to 0.92, which is below the claimed range of at least 0.98.

The golf ball of Example 4 has a compression ratio of 1.03, however, the solid core of Example 4 has an extremely high compression of 5.61 mm, which is greater than the claimed range of 3.2 to 4.5 mm. Thus, Higuchi teaches that in order to meet the claimed compression ratio, the compression of the core must be outside the claimed range. Said differently, Higuchi fails to teach or suggest a golf ball having both a compression ratio of at least 0.98 and a core compression of 3.2 to 4.5. Furthermore, the golf ball of Example 4 also has a cover hardness of 49.76 Shore D (converted using the DuPont equation of "Shore D= (0.76 X JIS-C)-8"). The cover hardness of 49.76 is also much lower than the claimed range of 60 to 68. This further evidences the teaching of Higuchi that in order to get a compression ratio of at least 0.98, the other properties of the golf ball must be modified in such a manner as to fall outside the claimed range.

Shama is used by the Examiner to teach compressions of the core and mantle. In Table 5 and 6 of Shama, the mantle layer has a preferred compression of 70 to 82 and the core has a preferred compression of 55 to 78. However, the compression described in Shama is the compression based on PGA standards signifying a force (kgf) needed for the deflection of 0.1 inch, which is different from the concept of the claimed of compression being the amount (mm) of deformation when subjected to a load of 1,275 N from an initial load of 98 N. The PGA compression is opposite to the claimed compression. Thus, Shama does not teach or suggest the claimed compression (mm) as relied on by the Examiner.

Finally, Applicant submits that the Examiner has failed to provide proper motivation to combine the references. Specifically, Higuchi teaches that the mantle must be harder than the core, resulting in a low compression for the mantle. However, in order for the compression ratio to be "at least 0.98," the mantle must be softer than the core. Therefore, in order to get the claimed compression ratio, the golf ball of Higuchi must be modified to have a mantle that is softer than the core. This is completely opposite of Higuchi's teachings and would destroy the purpose of the Higuchi invention. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there it no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Consequently, one skilled in the art would not be motivated to modify the Higuchi reference as suggested by the Examiner because it would destroy the intended purpose of the Higuchi golf ball.

In view of the above remarks, Applicant requests that the rejection of claims 1 and 6-17 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

II. Double Patenting

Claims 1, 4, 5, 11, 12 and 16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 09/776,663 (Your ref.: FAP-2796; Our ref.: Q63008). Applicant submits herewith a Terminal Disclaimer. Accordingly, Applicant respectfully requests that the double patenting rejection be reconsidered and withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 4 and 5 are canceled.

The claims are amended as follows:

1. (Twice Amended) A solid multi-piece golf ball comprising a solid core, a mantle of at least one layer enclosing the solid core, and a cover of at least one layer enclosing the mantle, wherein the mantle is made of a material composed primarily of a thermoplastic resin, and has a thickness of up to 1.5 mm,

the mantle and the solid core have a compression ratio, defined as (compression of mantle)/(compression of solid core), of at least 0.98, the compression being the amount of deformation when subjected to a load of 1,275 N from an initial load of 98 N, and

the solid core has a compression of 3.2 to 4.5 mm and has a surface and a center with a difference in JIS-C hardness therebetween, defined as (surface hardness - center hardness), of at least 5, and

the cover is made of a material composed primarily of a thermoplastic resin having a Shore D hardness of 60 to 68.